LISTING OF CLAIMS

1. (Currently amended) A method of monitoring flatness of an extreme ultraviolet (EUV) lithography mask, comprising:

chucking the EUV mask to a chuck;

scanning the chucked EUV mask with a contactless capacitance probe to generate a first elevation data set for the EUV mask; ~~and~~

generating a first flatness profile using the first elevation data set;

comparing the first flatness profile against flatness tolerance parameters; and

if the first flatness profile exceeds the flatness tolerance parameters;

removing the EUV mask from the chuck;

checking at least one of the EUV mask and the chuck for contamination;

if contamination is present, cleaning a contaminated area; and

rechucking the EUV mask to the chuck.

2-5. (Canceled)

6. (Currently amended) The method according to claim [[5]] 1, further comprising:

rescanning the EUV mask with the capacitance probe to generate a second elevation data set for the EUV mask; and

generating a second flatness profile using the second elevation data set.

7. (Original) The method according to claim 6, further comprising comparing the first flatness profile and the second flatness profile.

8. (Currently amended) The method according to claim [[5]] 1, further comprising:

rotating the EUV mask with respect to the chuck before rechucking the EUV mask;

rescanning the rotated EUV mask with the capacitance probe to generate a second elevation data set for the EUV mask; and

generating a second flatness profile using the second elevation data set.

9. (Original) The method according to claim 8, further comprising comparing the first flatness profile and the second flatness profile to determine if detected flatness variations rotated with the rotation of the EUV mask.

10. (Original) The method according to claim 9, further comprising adjusting a set of electrostatic clamping forces used to retain the EUV mask to the chuck if the detected flatness variations rotated with the rotation of the EUV mask.

11. (Currently amended) A method of monitoring flatness of an extreme ultraviolet (EUV) lithography mask, comprising:

chucking the EUV mask to a chuck;

scanning the chucked EUV mask to generate a first flatness profile;

removing the EUV mask from the chuck;

rotating the EUV mask with respect to the chuck;

rechucking the rotated EUV mask to the chuck; and

rescanning the rotated and rechucked EUV mask to generate a second flatness profile.

12. (Original) The method according to claim 11, further comprising comparing the first flatness profile and the second flatness profile to determine if detected flatness variations rotated with the rotation of the EUV mask.

13. (Original) The method according to claim 12, further comprising adjusting a set of electrostatic clamping forces used to retain the EUV mask to the chuck if the detected flatness variations rotated with the rotation of the EUV mask.

14. (Currently amended) A system for monitoring flatness of an extreme ultraviolet (EUV) lithography mask, comprising:

a mask platen assembly including a chuck with a mask mounting surface for receiving the EUV mask and electrostatically retaining the EUV mask to the chuck;

a contactless capacitance probe for scanning the EUV mask to generate elevation data for the EUV mask; and

a controller for receiving the elevation data and generating a flatness profile using the elevation data and for controlling the electrostatic clamping forces of the mask platen assembly, wherein the controller executes logic to:

conduct a first scan of the EUV mask while chucked to generate a first flatness profile and, following a rotation of the EUV mask with respect to the chuck, conduct a second scan of the EUV mask while chucked to generate a second flatness profile; and

compare the first flatness profile and the second flatness profile to determine if detected flatness variations rotated with the rotation of the EUV mask.

15. (Canceled)

16. (Currently amended) The system according to claim [[15]] 14, wherein the controller executes logic to adjust a set of electrostatic clamping forces used to retain the EUV mask to the chuck if the detected flatness variations rotated with the rotation of the EUV mask.

17. (New) The method according to claim 1, wherein the EUV mask is a reflective mask.

18. (New) The method according to claim 11, wherein the EUV mask is a reflective mask.

19. (New) The method according to claim 11, wherein the scanning and the rescanning is carried out with a contactless capacitance probe.

20. (New) The system according to claim 14, wherein the EUV mask is a reflective mask.